

What is claimed is:

- 1        1.        A method for processing seismic data comprising:
  - 2                (a)        comparing data in a window comprising a portion of a first data segment
  - 3                        with data in a corresponding window comprising a portion of a second
  - 4                        data segment, wherein said first data segment and said second data
  - 5                        segment are selected from a plurality of data segments acquired using a
  - 6                        plurality of seismic sweeps; and
  - 7                (b)        changing said data in a window using said data in a corresponding window
  - 8                        based on said comparison.
- 1        2.        The method of claim 1, wherein changing said data in a window further comprises
- 2                replacing said data in a window using said data in a corresponding window.
- 1        3.        The method of claim 1 further comprising stacking said plurality of data segments
- 2                to form a new data segment.
- 1        4.        The method of claim 3 further comprising extracting a listen time from said new
- 2                data segment.
- 1        5.        The method of claim 1 wherein said plurality of data segments each comprise a
- 2                recorded data and a listen time.

- 1 6. The method of claim 1 further comprising phase shifting said second data  
2 segment to a phase corresponding to said first data segment.
- 1 7. The method of claim 1 wherein said second data segment comprises a  
2 combination of a plurality of said plurality of data segments.
- 1 8. The method of claim 7 wherein said combination comprises combining said  
2 plurality of said plurality of data segments using at least one of: i) an arithmetic  
3 average, ii) a median average, and iii) a weighted average.
- 1 9. The method of claim 1 further comprising using RMS values for comparing said  
2 data in a window of a first data segment with said data in a window of a second  
3 data segment.
- 1 10. The method of claim 1 wherein a listen time data segment is combined with an  
2 initial data segment by time series addition.